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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/709,809	11/09/2000	Rich Bontrager	462-99-015	4959

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HONEYWELL INTERNATIONAL INC.
101 COLUMBIA ROAD
P O BOX 2245
MORRISTOWN, NJ 07962-2245

EXAMINER

KNEPPER, DAVID D

ART UNIT	PAPER NUMBER
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2654

DATE MAILED: 11/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/709,809	Applicant(s) BONTRAGER, RICH	
	Examiner. David D. Knepper	Art Unit 2654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-16,23-29,31,32,34-38,40 and 42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-16,23-29,31,32,34-38,40 and 42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. Applicant's correspondence filed on 31 August 2004 (Amendment) has been received and considered. Claims 1-10, 17-22, 30, 33, 39 and 41 have been canceled. Claims 11-16, 23-29, 31, 32, 34-38, 40 and 42 are pending.

Abstract

2. The Abstract of the Disclosure is accepted.

Claims

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 11-16, 23-27, 40 and 42 are rejected under 35 U.S.C. § 103 as being unpatentable over Belgin (5,220,681).

As per claims 11-16, 40 and 42 a communication apparatus is taught by Belgin (col. 1, lines 16-21) that may be integrated with avionics, navigation and communications equipment (abstract):

“display device” (his display 50, figure 1);

“audio synthesizer” (his speech synthesizer 60, figure 1); and

“a controller in communication with said display device and said audio synthesizer said controller communicates with said audio synthesizer when a malfunction is detected with respect to said display device” (suggested by his micro-controller 20, figure 1 and in col. 3, lines 55-68 where he teaches that the apparatus will communicate an appropriate message with the user by way of a display unit 50...and/or an audible message verbalized to the system user by way of a speech synthesizer 60).

Belgin clearly teaches a programmed computer which selectively controls user feedback via a display and a speech synthesizer as noted above. The preferred embodiment is for use in a radio receiver (fig. 1) where the device will communicate the frequency to which the radio is tuned as well as related modes of operational information (see columns 3-4).

It is noted that Belgin does not explicitly teach the use of his synthesizer “when a malfunction is detected with respect to said display device”. However, he teaches that the claimed information signal may be visually displayed by way of a display unit 50 ... and/or an audible message verbalized to the system user by way of a speech synthesizer 60 (column 3, lines 58-61). He also teaches details whereby the programmed microcontroller 20 monitors operations and is able to automatically generated a ‘warning’ message (claim 4, lines 1-6) to identify anomalies and the use of a specific warning messages in col. 7, lines 40-50 when it detects a loss of station or to generate an alert message when the battery is low and other systems must be powered down. It would have been obvious for a person having ordinary skill in the pertinent art, at the time the invention was made, to utilize any combination of controls to implement the combination of one or both visual and/or audible information because Belgin teaches that a computer may be controlled as desired to provide this type of information when

combined with a display and a speech synthesizer. It would have been obvious to provide the necessary signal to either the display or the synthesizer if one of them malfunctions because Belgin teaches that it is important to augment prior art avionics equipment to allow indication of the frequency to which the radio is tuned through an existing display or through a voice synthesizer (col. 2, lines 45-49). Based on Belgin's teaching in col. 4, lines 1-6, one of ordinary skill in the art would expect the prior art system to be able to detect and warn the user of a malfunction. For example, if the display or the synthesizer was to have an anomaly, Belgin's device would be expected to provide appropriate warning(s) to the user utilizing the remaining I/O available to the computer.

Any known adjustments are obvious because Belgin teaches in column 5, lines 9-12: Control adjustments are readily effected by way of a straightforward modification of the control software through which microcontroller 20 supervises operation of the system. Thus, it would be obvious to control the amount a variety of detail provided by the display or synthesizer in combination or individually for the generation of user output for regular operational details and also for any detection of anomalies.

One of ordinary skill in the art would be very high in the field of endeavor claimed (see prior art applied), requiring knowledge in computers, speech signal processing, communications and, more specifically, aviation related navigation, communication and control systems that combine the other disciplines. Therefore, the disclaimer in Belgin, col. 3, lines 3-17 that certain obvious structure, control and arrangement details are omitted, is indicative of the high level of skill in the art assumed by Belgin to control the interaction between the display and the speech synthesizer such that he merely uses the term and/or as noted above in col. 3 to indicate that

alternative controls of the desired output would be obvious depending on the condition(s) of the system as a whole.

Claims 23-27: See the arguments for claim 11 above. The detection of a second operating mode is taught in column 7, lines 40-45 where his system detect a loss of signal or a signal that is too weak and provides a "loss of station" announcement.

5. Claims 28, 29, 31, 32 and 34-38 11-16, and 23-27 are rejected under 35 U.S.C. § 103 as being unpatentable over Belgin (5,220,681) as applied to claims 11-16, 23-27, 40 and 42 and further in view of Sinay (Integrated Communication, Radio Navigation and Identification System (ICRNI)).

It is noted that Belgin does not teach detection of a complete failure. However, this is suggested by Belgin's addition of a speech synthesizer to a common display to provide additional warning information. Sinay teaches in detail that it is well known to utilize backup to overcome the failure of other systems such as the Avionic Display System (ADS). See page 425 where he teaches that his system can recover from the failure of other systems by passing the data and control to other subsystems. Therefore, it would have been obvious to overcome the failure of one system (such as a display) by transferring output to a system capable of presenting the information in another format (such as audio) because Sinay teaches that this will allow the system to better meet the needs of the user.

Prior Art

6. The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

Nojiri (4,438,422) is cited to show another example for using speech synthesizers to monitor, detect and provide audible warnings for a variety of real-time malfunctions.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. **Any response to this action should be mailed to:**

Box AF
Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

TC2600 Fax Center
(703) 872-9315

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Knepper whose telephone number is (703) 305-9644. The examiner can normally be reached on Monday-Thursday from 07:30 a.m.-6:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil, can be reached on (703) 305-9645.

Any inquiry of a general nature or relating to the status of this application should be directed to customer service whose telephone number is (703) 306-0377.



David D. Knepper

Primary Examiner

Art Unit 2654

November 24, 2004